GREATER TOMPKINS COUNTY MUNICIPAL HEALTH INSURANCE CONSORTIUM

Actuarial Attestations

Pursuant to Article 47 of the

New York State Insurance Law

Prepared by:

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SUMMARY OF PLAN OPERATIONS

History

The Greater Tompkins County Municipal Health Insurance Consortium was established on October 1, 2010 when the New York State Department of Financial Services (formerly known as the State of New York Insurance Department) issued the Consortium a Certificate of Authority pursuant to Article 47 of the New York State Insurance Law. The Consortium's actual operations, both administrative and financial, began on January 1, 2011 when it began providing health insurance coverage to more than 2,000 employees and retirees associated with the thirteen (13) founding participating municipalities:

City of Ithaca	Town of Ithaca
County of Tompkins	Town of Ulysses
Town of Caroline	Village of Cayuga Heights
Town of Danby	Village of Dryden
Town of Dryden	Village of Groton
Town of Enfield	Village of Trumansburg
Town of Groton	

Since its inception, the Consortium has operated and been managed based on sound financial principles which have allowed the Consortium to impose modest rate increases while creating more than adequate cash assets to cover the liabilities of the Consortium and to provide adequate protections and cash flow for the Consortium's operations.

As of December 31, 2015, the Consortium consisted of a total of seventeen (17) participating municipalities with the addition of the City of Cortland on January 1, 2013, the Town of Lansing on January 1, 2013, the Village of Homer on January 1, 2015, and the Town of Willet on May 1, 2015.

In addition, the Consortium is adding three (3) new municipal partners as of January 1, 2016 with the addition of the Town of Marathon, the Town of Truxton, and the Town of Virgil, bringing the number of participating municipalities up to twenty (20).

Mission and Vision Statement

Belief:

Individually and collectively we invest in realizing high quality, affordable, dependable Health Insurance

Mission Statement:
The Greater Tompkins County Municipal Health Insurance Consortium is an efficient inter-municipal cooperative that provides high-quality, cost-stable health insurance for members and their employees and retirees.

Vision Statement:
The Greater Tompkins County Municipal Health Insurance Consortium provides its municipal partners in Tompkins County and the six contiguous counties, a menu of health insurance plans to the benefit of the employees, retirees, and their families.

- The Consortium administers operations by collaborating with claims administrators, providers, and employee representatives in an effort to manage its costs, efficiencies, and success.

- The Consortium strives to provide a trust-worthy, responsive, and efficient vehicle that enables access to its quality products, models a new health insurance paradigm, and educates its members to become more directly involved in their own personal health.

- The Consortium promotes a culture of preventative health care for the well-being of its members.

Consortium Goal

The consortium, as we understand it, was formed based on the principle that by having the municipalities pool their resources in a shared funding self-insured health insurance plan that the participating municipalities would be able to provide their employees, retirees, and all covered members with benefit plans consistent with those guaranteed by their collective bargaining agreements, personnel policies, and/or legislative policies in a more financial efficient manner.

Governance and Internal Administration

The Greater Tompkins County Municipal Health Insurance Consortium is managed and overseen by a Board of Directors which consists of one representative from each of the participating municipalities and three (3) union representatives. The Board of Directors is responsible for all plan operations, including, but not limited to, managing the finances of the Consortium. The Consortium receives support services through a combination of internal personnel primarily provided by the County of Tompkins and a number of professional firms. These municipal employers and private firms collectively contract with the Consortium to provide services relative to general consulting advice and guidance, financial audit, legal, accounting, claims audit, and actuarial services.

Medical Plan Claims Administration

The Greater Tompkins County Municipal Health Insurance Consortium is a self-insured plan which currently contracts with Excellus BlueCross BlueShield for the services related to the hospital, medical, and surgical plan. The Consortium contracts with Excellus via an Administrative Services Contract (ASC) for the provision of services by Excellus which includes, but may not be limited to, membership, billing, provider network development and management, claims adjudication, customer service and support, and the overall management of the various benefit plans. In terms of medical plans, the Consortium's benefit plan menu currently offers an array of options including indemnity plans, PPO Plans, Comprehensive Benefit Plans, PPACA Metal Level Plans, and Medicare Supplement Plans. Most of these plans offer prescription drug coverage as a separate copay plan structure which we will summarize later on in this report.

Indemnity Plans

The reference to indemnity plans is a fairly old description of a medical benefits plan which is structured to provide paid-in-full basic hospital, medical, and surgical care coverage. These plans typically have a "major medical" component which is subject to a deductible, coinsurance, and an out-of-pocket maximum. These plans are usually coupled with a prescription drug card program or have the prescription drugs embedded in the "major medical" as a way to provide the covered members with a complete benefit plan to treat their illnesses and/or injuries. The Consortium currently offers the following Indemnity Plans:

Plan Code	*Medical Plan Benefit Description*
MM1	GTCMHIC Indemnity Medical Plan 1 ($50/ $150 Deductible and $400/$1,200 OOP Max.)
MM2	GTCMHIC Indemnity Medical Plan 2 ($100 / $200 Deductible and $400/$800 OOP Max.)
MM3	GTCMHIC Indemnity Medical Plan 3 ($100 / $200 Deductible and $750/$2,250 OOP Max.)
MM4	GTCMHIC Indemnity Medical Plan 4 ($100 / $250 Deductible and $400/$1,200 OOP Max.)
MM5	GTCMHIC Indemnity Medical Plan 5 ($100 / $300 Deductible and $400/$1,200 OOP Max.)
MM6	GTCMHIC Indemnity Medical Plan 6 (Comprehensive Value Plan)
MM7	GTCMHIC Indemnity Medical Plan 7 (Rx Embedded in MM)

PPO Plans

A Preferred Provider Organization (PPO) Plan is a more modern plan design which requires the covered members to pay a modest copayment for certain in-network medical services.

However, as with indemnity plans, many of the in-network basic hospital, medical, and surgical services are "paid-in-full" in the Consortium's PPO Plans. This type of plan also provides benefits for out-of-network services which are usually subject to a deductible, coinsurance, and out-of-pocket maximum. These plans are typically coupled with a prescription drug card program to provide the covered members with a complete benefit plan to treat their illnesses and/or injuries. The Consortium currently offers the following PPO Plans:

Plan Code	*Medical Plan Benefit Description*
PPO1	$10.00 GTCMHIC PPO Plan
PPO2	$15.00 GTCMHIC PPO Plan
PPO3	$20.00 GTCMHIC PPO Plan
PPOT	$10.00 GTCMHIC "Teamsters Look Alike" PPO Plan

Medicare Supplement Plan
Currently the Consortium does offer a medical supplemental plan for retirees who are Medicare-eligible which is designed to provide benefits to compliment the Federal Medicare Program Parts A and B. This Medicare Secondary Plan can be offered as a medical only plan or it can be coupled with a three-tier prescription drug card program.

PPACA Metal Level Plans
To stay competitive with benefit plan offerings available in the health insurance marketplace and through private market insurance companies, the Consortium recently approved the inclusion of the GTCMHIC Standard Platinum, Gold, Silver, and Bronze Plans. The PPACA Metal Level Plans are designed to maintain an Actuarial Value (AV) of 90%, 80%, 70%, and 60%, respectfully.

The Actuarial Value is the percentage of the average person's medical care costs which will be paid by the plan each year. As a result, the GTCMHIC Standard Platinum, Gold, Silver, and Bronze Plans' benefits are subject to possible alteration each year to ensure the AV of each plan is maintained. It should be noted that unlike the other medical benefit plans offered by the Consortium, these plans do not have any options available to choose from in terms of varying levels of deductibles, copayments, coinsurance amounts, or out-of-pocket maximums on the medical or prescription drug side of the plan.

The Consortium will calculate the Actuarial Value of the Metal Level Plans each year using the AV Calculator developed by the Centers for Medicare & Medicaid Services (CMS) Center for Consumer Information & Insurance Oversight (CCIIO) which was implemented in accordance with the Patient Protection and Affordable Care Act (ACA). If such calculator is no longer available or in use, an independent Actuary will develop the AV of the health insurance plans on an annual basis.

In either case, it is the intent that the result will represent an empirical estimate of the AV calculated in a manner that provides a close approximation to the actual average spending by a wide range of consumers in a standard population and that said AV will be equal to 90% for the Platinum Plan, 80% for the Gold Plan, 70% for the Silver Plan, and 60% for the Bronze Plan within an acceptable deviation of + or – 2% for these specific plan designs.

Prescription Drug Claims Administration

In addition to Excellus BlueCross BlueShield, the Consortium also engages the services of a Prescription Benefit Manager (PBM) to administer the various prescription drug plans offered by the Consortium. Currently, the PBM utilized by the Consortium is ProAct, Inc. which has been the acting PBM since January 1, 2013. Prior to that the Consortium engaged the services of Express Scripts who was the PBM from January 1, 2011 to December 31, 2012.

The Consortium offers both two-tier and three-tier copayment structure prescription drug plans. The overwhelming majority of the covered members are enrolled in the three-tier prescription drug programs which is a formulary based product that charges a different copayment based on the tier classification of the medication being purchased. The following are the current two-tier and three-tier prescription drug options available:

Two-Tier Plans

Plan Code	*Retail Pharmacy*		*Mail-Order Pharmacy*	
	Generic	*Brand Name*	*Generic*	*Brand Name*
2T1	$1.00	$1.00	$0.00	$0.00
2T2	$2.00	$5.00	$0.00	$0.00
2T3	$2.00	$10.00	$0.00	$0.00
2T4	$0.00	$15.00	$0.00	$30.00
2T5	$5.00	$15.00	$10.00	$30.00
2T6	$5.00	$20.00	$10.00	$40.00

Three-Tier Plans

Plan Code	**Retail Pharmacy**			**Mail-Order Pharmacy**		
	Tier 1	**Tier 2**	**Tier 3**	**Tier 1**	**Tier 2**	**Tier 3**
	Generic	**Preferred Brand**	**Non-Preferred Brand**	**Generic**	**Preferred Brand**	**Non-Preferred Brand**
3T1	$0.00	$5.00	$20.00	$0.00	$10.00	$40.00
3T2	$5.00	$10.00	$25.00	$5.00	$10.00	$25.00
3T3	$5.00	$10.00	$25.00	$10.00	$20.00	$50.00
3T4	$5.00	$10.00	$25.00	$15.00	$30.00	$75.00
3T5	$5.00	$15.00	$25.00	$5.00	$15.00	$25.00
3T5a	$5.00	$15.00	$30.00	$5.00	$15.00	$30.00
3T6	$5.00	$15.00	$30.00	$10.00	$30.00	$60.00
3T7	$5.00	$20.00	$35.00	$10.00	$40.00	$70.00
3T8	$10.00	$20.00	$35.00	$20.00	$40.00	$70.00
3T9	$10.00	$25.00	$40.00	$20.00	$50.00	$80.00
3T10	$15.00	$30.00	$45.00	$30.00	$60.00	$90.00
3T11	20%	20%	40%	15%	15%	40%
3T12	20%	30%	45%	20%	30%	45%
3T13	20%	30%	50%	20%	30%	50%

It should be noted that the plan designs shaded grey above are no longer available for additional members to join. The particular plan designs are for the current enrolled members only.

Scope of Work

In terms of the specifics of this engagement, Amory Associates, LLC, a consulting actuarial firm has been retained by the Greater Tompkins County Municipal Health Insurance Consortium to provide an analysis and actuarial attestation relative to the adequacy of the Consortium's "reserve for payment of claims and expenses thereon reported but not yet paid, and claims and expenses thereon incurred but not yet reported" as of December 31, 2015. This reserve has been set at a level of 12% of the incurred claims associated with the Consortium for the 2015 Fiscal Year. We have been advised that this is the reserve level which was authorized by the New York State Department of Financial Services upon the approval of the Consortium's Article 47 Application and issuance of its Certificate of Authority on October 1, 2010.

As stated earlier in this document, the Greater Tompkins County Municipal Health Insurance Consortium is operating pursuant to a Certificate of Authority which was issued by the New York State Department of Financial Services (formerly the State of New York Insurance Department). This particular law required the Consortium to submit an application which included two exhibits which mandated that the Consortium submit an Actuarial Attestation relative to the surplus of the plan (Exhibit B1) and an Actuarial Attestation associated with the Soundness of the Premium Equivalent Rates (Exhibit B2).

Exhibit B1 of the Application is related to New York State Insurance Law, Section 4706, which summarizes the reserve requirements of a municipal cooperative health benefit plan, as follows (formatting and emphasis added):

§4706. Reserve and Surplus Requirements.

(a) Notwithstanding any provision of law, the governing board of a municipal cooperative health benefit plan shall establish a reserve fund, and the plan's chief fiscal officer shall cause to be paid into the reserve fund the amounts necessary to satisfy all contractual obligations and liabilities of the plan, including:

(1) a reserve for payment of claims and expenses thereon reported but not yet paid, and claims and expenses thereon incurred but not yet reported which shall not be less than an amount equal to twenty-five percent of expected incurred claims and expenses thereon for the current plan year, unless a qualified actuary has demonstrated to the superintendent's satisfaction that a lesser amount will be adequate;

(2) a reserve for unearned premium equivalents;

(3) a claim stabilization reserve;

(4) a reserve for other obligations of the municipal cooperative health benefit plan; and

(5) a surplus account, established and maintained for the sole purpose of satisfying unexpected obligations of the municipal cooperative health benefit plan in the event of termination or abandonment of the plan, which shall not be less than:

A ***five percent of the annualized earned premium equivalents during the current fiscal year of a municipal cooperative health benefit plan which consists of five or more participating municipal corporations and covers two thousand or more employees and retirees; or***

As part of the ongoing oversight of the Consortium by the New York State Department of Financial Services, the Consortium is required to complete and submit an Annual Report each year to the Superintendent of the Department within 120-days of the close of the fiscal year in accordance with Section 4710 of the New York State Insurance Law, as follows (emphasis and formatting added):

§4710. Additional Filing Requirements and Annual Report.

(a) The governing board of the municipal cooperative health benefit plan shall:

(1) file for approval with the superintendent a description of material changes in any information provided in the application for certificate of authority in the form and manner prescribed by the superintendent;

(2) annually, not later than one hundred twenty days after the close of the plan year, file a report with the superintendent showing the financial condition and affairs of the plan (including an annual independent financial audit statement and independent actuarial opinion) as of the end of the preceding plan year, in such form and providing such other information as the superintendent may prescribe and in compliance with section three hundred seven of this chapter;

The Annual Report includes N.Y. Schedule F – Claims Payable Analysis, Page NY11 which is the summary of the unpaid claims reserve which Armory Associates, LLC is attesting to in this report.

Limited Use of Work Product and Data Sources

Limited Use of Work Product

Armory Associates, LLC's report and related work product are intended for the internal use of the Greater Tompkins County Municipal Health Insurance Consortium. These collective works are for use by the Consortium's consultant Locey & Cahill, LLC and the Consortium's financial auditors Ciaschi, Dietershagen, Little, Mickelson & Company and the Bonadio Group in connection with the completion of the year-end financial audit. In addition, the Consortium, its internal personnel, and its advisors may utilize this information contained in this report for the completion of the Consortium's Annual Report (JURAT) to the New York State Department of Financial Services (NYS-DFS) as required.

This report, including its attachments and related work-product may include proprietary information and, as such, should be considered a confidential document and not distributed to any other external parties without first obtaining the written consent of Armory Associates, LLC. If such consent is granted, Armory Associates, LLC insists that the distribution of this report and work-product be done in its entirety along with a statement advising the receiver of such information that this information should be reviewed by a qualified actuary to ensure the information and any conclusions are interpreted and reviewed in accordance with actuarial standards of practice.

Please note that the information contained in this report has been developed specifically for the Consortium based on its need to satisfy the requirements of Article 47 of the New York State Insurance Law and the requirements set forth by the New York State Department of Financial Services relative to the annual filing of information by Article 47 Municipal Cooperative Health Benefit Plans. As such, the information, assumptions, and conclusions found in this report may not be appropriate to use for other purposes. Armory Associates, LLC does not intend to benefit from the overall results of the report and we assume no duty, liability or obligation to parties that use this work for other reasons other than its stated intention.

Information and Data Reliance

Armory Associates, LLC relied upon the paid claims, census, and other related data as provided by the Consortium's consultant Locey & Cahill, LLC, its medical benefits administrator Excellus BlueCross BlueShield, and its prescription drug benefits administrator ProAct, Inc. Armory Associates, LLC relied upon the accuracy of this data in the development of its work-product, opinions, and conclusions. Armory Associates, LLC did not audit or verify the accuracy of the paid claims data, census data, or any other information received in connection with his analysis. It should be further noted that the paid claims data received included claims related expenses associated with the Excellus BlueCross BlueShield BlueCard Network and the New York State Health Care Reform Act (HCRA) surcharge. If the underlying data or information is flawed, inaccurate, or incomplete, the results of our analysis may likewise be flawed, inaccurate, or incomplete.

Armory Associate's Summary of Findings

Article 47 of the New York State Insurance Law

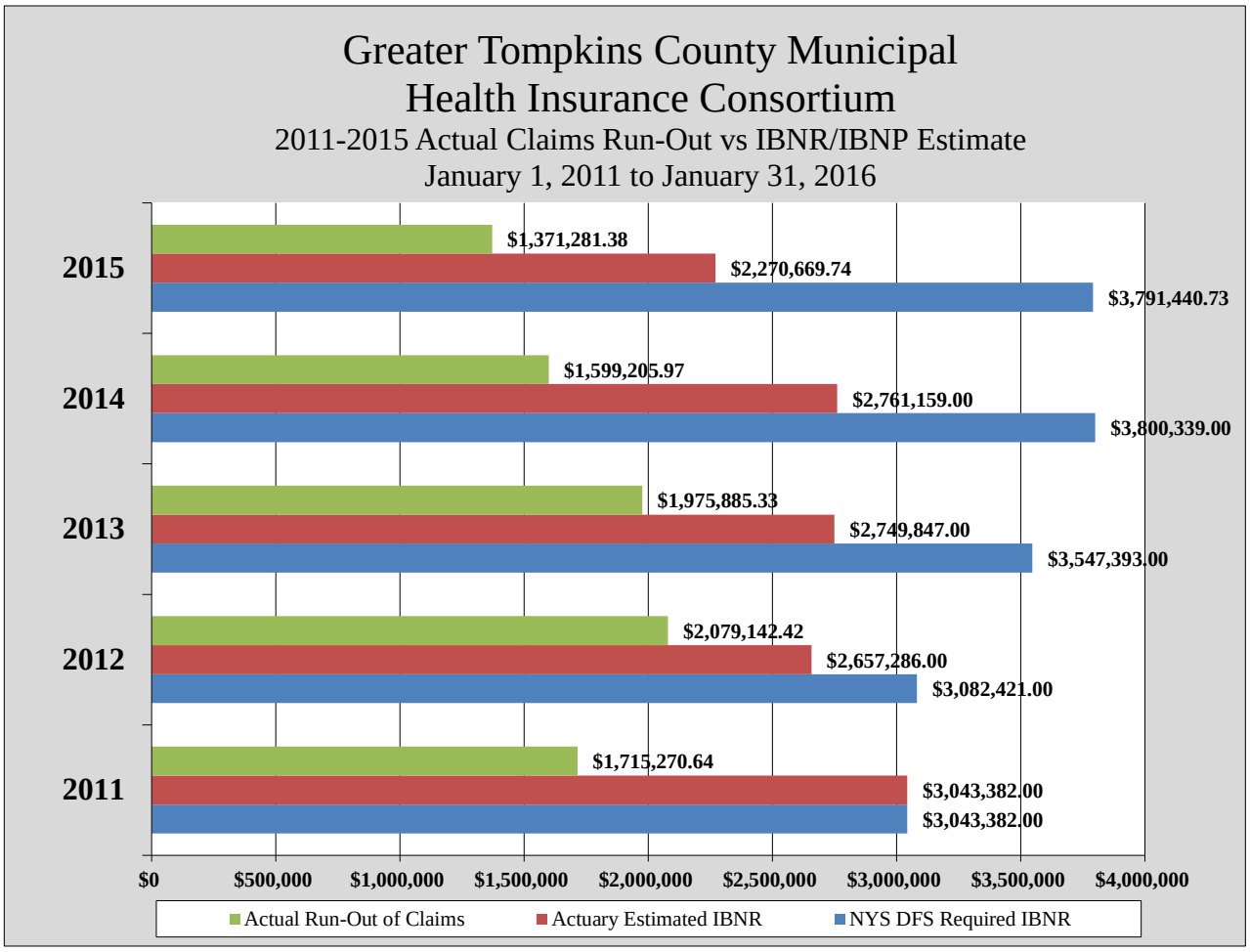
As of December 31, 2015, the Greater Tompkins County Municipal Health Insurance Consortium established a reserve in the amount of $3,786,231 which represents the incurred but not reported (IBNR) and incurred but not paid (IBNP) claims reserve liability. This process was completed in accordance with Section 4706(a)(1) of Article 47 of the New York State Insurance Law which reads as follows (emphasis added):

> ***a reserve for payment of claims and expenses thereon reported but not yet paid, and claims and expenses thereon incurred but not yet reported which shall not be less than an amount equal to twenty-five percent of expected incurred claims and expenses thereon for the current plan year, unless a qualified actuary has demonstrated to the superintendent's satisfaction that a lesser amount will be adequate;***

It should be noted that Armory Associates, LLC was advised by the Consortium that the New York State Department of Financial Services has approved the use of a factor of 12% of incurred medical (hospital, surgical, and medical) and prescription drug claims. It is the opinion of Armory Associates, LLC that this factor is a conservative factor based on the actual claims experience of the Consortium. Please refer to the table below which summarizes the estimates which are also contained in Attachment A at the end of this report and in NY11 of the Consortium's Annual Report.

Description	As Estimated by Armory Associates, LLC			GTCMHIC NYS Article 47 Required IBNP/IBNR
	Medical	Rx	Totals	
1. IBNR/IBNP - Calculated Using Completion Factor Method (Attachment B and C)	$2,020,307	$7,077	$2,027,384	
2. Standard Adverse Deviation Set at 10% (Row 1 x 0.1000)	$202,031	$708	$202,738	
3. Claims Run-Out Administrative Expense Estimate (Row 1 x 0.0200)	$40,406	$142	$40,548	
4. Total Claims Liability as of 12/31/2015 (Row 1+ Row 2+Row 3)	$2,262,744	$7,926	$2,270,670	$3,631,888
5. 2015 Incurred Claims (Attachment D)	$20,405,771	$8,498,749	$28,904,520	$30,265,738
6. Total Liability as a % of Incurred Claims (Row 4 ÷ Row 5)			7.86%	12.00%

It is the opinion of Armory Associates, LLC that the reserve fund established by the Greater Tompkins County Municipal Health Insurance Consortium at the close of the 2015 Fiscal Year is sufficient to meet the Consortium's outstanding obligations and are in compliance with the terms and conditions of the Consortium's Certificate of Authority issued by the New York State Department of Financial Services in accordance with Article 47 of the New York State Insurance Law. As proof of this opinion, Armory Associates, LLC reviewed prior years to see how the actual claims run-out performed in comparison to the estimates provided by the previous actuaries and the requirements set forth by the New York State Department of Financial Services as of January 31, 2016. Please refer to the following exhibit for a summary of this information:



All actuarial computations included in this analysis and report were prepared in accordance with generally accepted actuarial principles and practices with reliance on the accuracy and completeness of the information provided by Excellus BlueCross BlueShield, ProAct, Inc., Locey & Cahill, LLC, and the Consortium for this purpose.

The financial solvency of a plan and the adequacy of plan's reserves are proven as time passes. No one can predict with absolute accuracy the increases in medical costs and/or the rate at which claims will be reported or paid. However, an estimate of the true cost can be provided through actuarial estimates. As actual experience emerges, we will evaluate the techniques and assumptions utilized in this analysis, making modifications as deemed necessary.

Armory Associate's Methodology

The most significant financial liability associated with any self-insured medical plan is the "incurred but not reported" (IBNR) and the "incurred but not paid" (IBNP) claims liability. The IBRN/IBNP liability represents the estimate of the dollar amount which will be paid on or after today for claims that were incurred on or before today (i.e., for which services have been rendered) prior to the measurement date of December 31, 2015, but for which payment will not be made until after the measurement date. This liability includes claims that have been incurred but not reported plus claims that have been reported but not paid.

The Department of Financial Services recommends that Municipal Cooperative Health Benefit Plans determine their IBNR/IBNP claim reserves separately for hospital, medical, and surgical claims and pharmacy claims. A recent study conducted by the New York State Department of Financial Service suggested that the IBNR/IBNP reserve should be set at an amount reflecting application of actuarial methods and principals including a ten-percent (10%) margin for claim fluctuations. However, the factor for medical claims reserves should be not less than seventeen-percent (17%) of incurred hospital, medical, and surgical claims and related expenses. The Department further noted that for prescription drug claims, the IBNR/IBNP reserve should be set at an amount reflecting application of the same actuarial methods and principals including a ten-percent (10%) margin for claim fluctuations for medical claims with the acceptable factor being no lower than five-percent (5%) of incurred pharmacy claims and related expenses.

With the above being said, Article 47 of the New York State Insurance Law has not been amended from its original requirement setting the IBNR/IBNP factor at 25% of incurred claims and expenses thereon. This particular requirement is in place unless "a qualified actuary has demonstrated to the Superintendent that a lesser amount will be adequate." We have been advised that the Consortium during its application process did in fact demonstrate to the Superintendent's satisfaction that utilizing a 12% IBNR/IBNP factor was prudent and reasonable. As a result, the Superintendent of the Department of Financial Services has agreed to allow the Consortium to establish its reserves for its IBNR/IBNP liability in an amount equal to or greater than twelve-percent (12%) of the expected hospital, medical, surgical, and pharmacy incurred claims. The balance of this section summarizes the approach used by Armory Associates, LLC to determine the adequacy of the IBNR/IBNP reserve held by the Consortium as of December 31, 2015 in the amount of $3,786,231.

While the ultimate amount of claims that will be paid out cannot be determined until history unfolds, a reasonable approximation can be provided through actuarial estimates, based on past claims payment patterns. Monthly paid claims for medical and pharmacy data segregated by the month incurred as developed by Excellus BlueCross BlueShield, Express Scripts/Medco, and ProAct, Inc. was provided by the Consortium's consultant Locey & Cahill, LLC for ***dates of service*** between January 1, 2011 through December 31, 2015 and ***paid dates*** between January 1, 2011 through December 31, 2015.

Estimates of the December 31, 2015 unpaid claims liabilities were obtained through the use Armory Associates' Development Method Model (Completion Factor Model). This model utilizes the provided monthly claims triangle to develop monthly completion factors by determining the ratio of successive month lags (cumulative paid amounts) using a straight average of nine (9) months of lag development. Prior to determining the successive month lags, the monthly paid claims data was adjusted to reflect the current membership basis. These completion factors represent the percentage of claims incurred in a given month that are paid in that month, the following month, etc. These factors are then applied to the cumulative claims paid for each month of incurred claims data to estimate the total incurred claims in the month. Unique completion factors were developed for medical claims and prescription drug claims separately as these two services complete with significantly differing patterns due primarily to the point of sale systems utilized by pharmacies which transmit claims on a more real time basis as compared to medical claims.

The final set of completion factors are used to calculate ultimate incurred claim estimates for each month of incurred claims from January 2013 through December 2015. The IBNR/IBNP reserve estimates for each month of incurred claims are calculated as the difference between ultimate incurred claims and claims incurred and paid for the month as of the valuation date. Also, based on Armory Associates analysis, it was assumed that the medical historical completion factor for the first month (December 2015)was to be "non-credible" and the total final expected claims for this month was determined using a 5% trend factor. Attachments B and C contain the detail of this calculation for medical and pharmacy incurred claim cost estimates.

Because the calculation of incurred but unpaid claim liabilities described above provides a "best estimate" of the true liabilities that will emerge, a margin for conservatism to account for volatility and fluctuations in the claims activity is appropriate. These margins vary in practice and are, in part, discretionary. It should be noted that the Armory Associates, LLC estimates include a ten-percent (10%) margin or Provision for Adverse Deviation (PAD). While the exact amount of the margin is subject to judgment, it is recommended that these margins be consistent from year to year.

A provision for claim settlement expenses is also typically appropriate. This amount represents the expense attributable to payment of incurred but unpaid claims. The estimates provided in this report included a 2% assumption for administration costs associated with paying reserve claims applied to the IBNR/IBNP. Attachment A provides a summary of the Armory Associates, LLC calculated IBNP components for both medical claims and pharmacy claims along with a comparison to the Consortium's "booked" IBNR/IBNP based on twelve-percent (12%) of medical and pharmacy incurred claims as reported by the Consortium's Treasurer.

Based on the results of Armory Associate's reserve calculations using actuarial development methods, the total IBNP, including margins described above, as of December 31, 2015 represents approximately 7.86% of annual incurred medical and pharmacy claims for 2015. In light of these results, the reserves held by the Consortium for claims that have been incurred but unpaid as of December 31, 2015 are sufficient to satisfy the Consortium's obligations.

Attachment A

Please refer to the following for a summary of the incurred and paid claims data for the past several fiscal years:

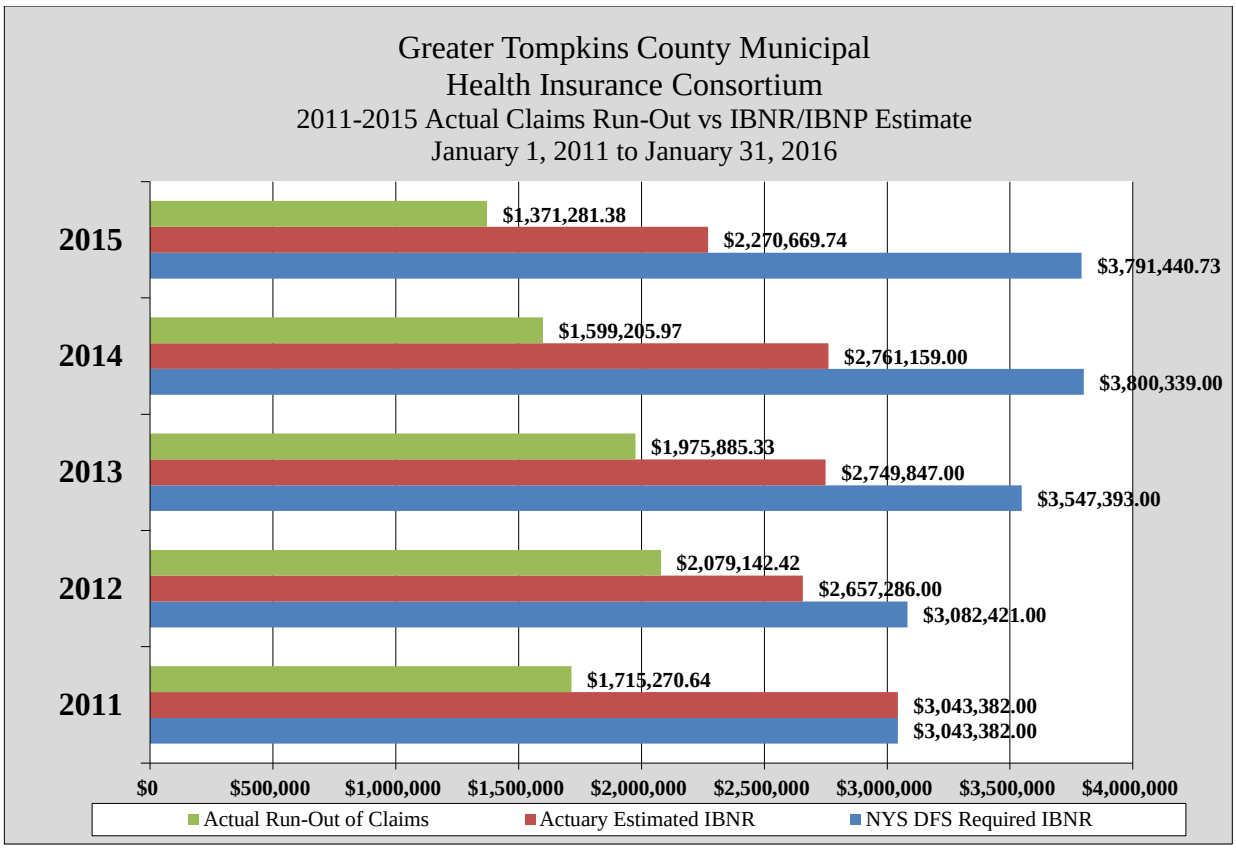
	Incurred 2011 Paid 2011	*Incurred 2011 Paid 2012*	*Incurred 2011 Paid 2013*	*Incurred 2011 Paid 2014*	*Incurred 2011 Paid 2015*	*Total Incurred 2011*	*Total Paid 2011*
Hospital/Medical	$15,750,814.63	$1,587,467.53	-$14,621.39	$305.82	$717.68	$17,324,684.27	$15,750,814.63
Prescription Drug	$6,465,217.00	$141,401.00	$0.00	$0.00	$0.00	$6,606,618.00	$6,465,217.00
Total	$22,216,031.63	$1,728,868.53	-$14,621.39	$305.82	$717.68	$23,931,302.27	$22,216,031.63
Percent of Total Incurred	92.83%	7.22%	-0.06%	0.00%	0.00%		

	Incurred 2012 Paid 2012	*Incurred 2012 Paid 2013*	*Incurred 2012 Paid 2014*	*Incurred 2012 Paid 2015*	*Incurred 2012 Paid 2016*	*Total Incurred 2012*	*Total Paid 2012*
Hospital/Medical	$16,435,539.13	$1,906,175.60	$31,460.83	$451.99	$0.00	$18,373,627.55	$18,023,006.66
Prescription Drug	$6,987,849.00	$141,054.00	$0.00	$0.00	$0.00	$7,128,903.00	$7,129,250.00
Total	$23,423,388.13	$2,047,229.60	$31,460.83	$451.99	$0.00	$25,502,530.55	$25,152,256.66
Percent of Total Incurred	91.85%	8.03%	0.12%	0.00%	0.00%		

	Incurred 2013 Paid 2013	*Incurred 2013 Paid 2014*	*Incurred 2013 Paid 2015*	*Incurred 2013 Paid 2016*	*Total Incurred 2013*	*Total Paid 2013*
Hospital/Medical	$19,829,032.74	$1,957,209.22	$24,099.11	-$1,097.96	$21,810,341.07	$21,720,586.95
Prescription Drug	$7,017,431.00	-$5,712.00	$289.00	$0.00	$7,012,008.00	$7,158,485.00
Total	$26,846,463.74	$1,951,497.22	$24,388.11	-$1,097.96	$28,822,349.07	$28,879,071.95
Percent of Total Incurred	93.14%	6.77%	0.08%	0.00%		

	Incurred 2014 Paid 2014	*Incurred 2014 Paid 2015*	*Incurred 2014 Paid 2016*	*Total Incurred 2014*	*Total Paid 2014*
Hospital/Medical	$20,616,174.23	$1,581,484.34	-$4,552.37	$22,193,106.20	$22,605,150.10
Prescription Drug	$7,746,659.00	$22,274.00	$0.00	$7,768,933.00	$7,740,947.00
Total	$28,362,833.23	$1,603,758.34	-$4,552.37	$29,962,039.20	$30,346,097.10
Percent of Total Incurred	94.66%	5.35%	-0.02%		

As clearly noted above, the 12% required claims liability factor mandated by the New York State Department of Financial Services is, in our professional opinion, a very conservative estimate as historically, the run-out of claims has not exceeded 8.25% of the incurred claims for a fiscal year.



Below is the summary of the 2015 analysis conducted by Armory Associates, LLC

Description	As Estimated by Armory Associates, LLC			GTCMHIC NYS Article 47 Required IBNP/IBNR
	Medical	Rx	Totals	
1. IBNR/IBNP - Calculated Using Completion Factor Method (Attachment B and C)	$2,020,307	$7,077	$2,027,384	
2. Standard Adverse Deviation Set at 10% (Row 1 x 0.1000)	$202,031	$708	$202,738	
3. Claims Run-Out Administrative Expense Estimate (Row 1 x 0.0200)	$40,406	$142	$40,548	
4. Total Claims Liability as of 12/31/2015 (Row 1+ Row 2+Row 3	$2,262,744	$7,926	$2,270,670	$3,631,888
5. 2015 Incurred Claims (Attachment D)	$20,405,771	$8,498,749	$28,904,520	$30,265,738
6. Total Liability as a % of Incurred Claims (Row 4 ÷ Row 6)			7.86%	12.00%

Attachment B

	Month	Completion Factor	Total Paid Claims to Date	Membership	Projected Final Claims	Reserve Before Subjective Adjs
Dec-15	1	39.98%	$629,225	5,016	**$1,573,966**	**$1,418,628**
Nov-15	2	84.43%	$1,564,467	5,023	**$1,852,983**	**$288,516**
Oct-15	3	93.29%	$2,016,532	5,007	**$2,161,564**	**$145,032**
Sep-15	4	96.27%	$1,610,246	5,036	**$1,672,609**	**$62,363**
Aug-15	5	97.74%	$1,595,831	5,029	**$1,632,671**	**$36,840**
Jul-15	6	99.05%	$1,511,390	5,036	**$1,525,899**	**$14,510**
Jun-15	7	99.24%	$1,801,546	5,025	**$1,815,387**	**$13,841**
May-15	8	99.25%	$1,536,843	5,030	**$1,548,412**	**$11,568**
Apr-15	9	99.49%	$1,660,217	5,025	**$1,668,665**	**$8,448**
Mar-15	10	100.01%	$1,896,154	5,027	**$1,895,884**	**($269)**
Feb-15	11	99.98%	$1,624,620	5,046	**$1,624,946**	**$326**
Jan-15	12	99.94%	$1,827,717	5,035	**$1,828,798**	**$1,081**
Dec-14	13	100.05%	$1,941,652	4,991	**$1,940,615**	**($1,037)**
Nov-14	14	100.03%	$1,829,349	5,003	**$1,828,814**	**($536)**
Oct-14	15	99.99%	$1,759,379	5,007	**$1,759,594**	**$215**
Sep-14	16	100.05%	$1,847,939	5,002	**$1,847,085**	**($854)**
Aug-14	17	99.87%	$1,607,356	5,005	**$1,609,458**	**$2,102**
Jul-14	18	99.88%	$1,675,617	5,010	**$1,677,635**	**$2,019**
Jun-14	19	99.84%	$1,935,550	5,008	**$1,938,645**	**$3,095**
May-14	20	99.82%	$1,761,311	5,014	**$1,764,503**	**$3,192**
Apr-14	21	99.84%	$1,984,314	5,022	**$1,987,554**	**$3,240**
Mar-14	22	99.91%	$2,030,457	5,026	**$2,032,249**	**$1,792**
Feb-14	23	99.93%	$1,757,567	5,042	**$1,758,726**	**$1,159**
Jan-14	24	99.93%	$2,067,166	5,044	**$2,068,617**	**$1,450**
Dec-13	25	99.92%	$1,767,220	5,060	**$1,768,586**	**$1,366**
Nov-13	26	99.94%	$1,867,627	5,066	**$1,868,663**	**$1,036**
Oct-13	27	99.97%	$2,163,098	5,056	**$2,163,706**	**$608**
Sep-13	28	99.97%	$1,857,141	5,066	**$1,857,635**	**$495**
Aug-13	29	100.00%	$1,746,041	5,062	**$1,746,121**	**$81**
Jul-13	30	100.00%	$1,963,738	5,080	**$1,963,742**	**$4**

Medical Claims Development Model

Based on Armory Associates analysis, it was assumed that the medical historical completion factor for the first month (December 2015)was to be "non-credible" and the total final expected claims for this month was determined using a 5% trend factor.

Attachment C

	Month	Completion Factor	Total Paid Claims to Date	Membership	Projected Final Claims	Reserve Before Subjective Adjs
Dec-15	1	99.60%	$875,446	5,016	**$878,955**	**$3,509**
Nov-15	2	99.60%	$747,537	5,023	**$750,533**	**$2,996**
Oct-15	3	99.99%	$717,078	5,007	**$717,180**	**$102**
Sep-15	4	100.02%	$669,680	5,036	**$669,553**	**($127)**
Aug-15	5	99.98%	$687,433	5,029	**$687,543**	**$110**
Jul-15	6	99.99%	$743,880	5,036	**$743,991**	**$111**
Jun-15	7	99.99%	$732,028	5,025	**$732,129**	**$101**
May-15	8	99.99%	$677,897	5,030	**$677,988**	**$91**
Apr-15	9	99.99%	$667,003	5,025	**$667,079**	**$76**
Mar-15	10	99.99%	$671,615	5,027	**$671,662**	**$47**
Feb-15	11	100.00%	$614,158	5,046	**$614,176**	**$18**
Jan-15	12	100.00%	$687,152	5,035	**$687,171**	**$19**
Dec-14	13	100.00%	$740,317	4,991	**$740,331**	**$14**
Nov-14	14	100.00%	$614,141	5,003	**$614,149**	**$8**
Oct-14	15	100.00%	$619,057	5,007	**$619,060**	**$3**
Sep-14	16	100.00%	$670,778	5,002	**$670,778**	**$0**
Aug-14	17	100.00%	$694,983	5,005	**$694,983**	**$0**
Jul-14	18	100.00%	$665,023	5,010	**$665,023**	**$0**

Prescription Drug Claims Development Model

Attachment D

STATEMENT AS OF December 31, 2015 (Year Ending) OF THE Greater Tompkins County Municipal Health Insurance Consortium (Name)

N.Y. SCHEDULE F — CLAIMS PAYABLE ANALYSIS (ON A FISCAL YEAR BASIS)

Calculation of Unpaid Claims Reserves at Year End

Unpaid claims reserve = [(percent approved by the department expressed as a decimal)*(Paid claims CY - Unpaid claims PY)]/(1-percent approved by the department expressed as a decimal)

Reserve requirement	12%	As Approved by the Department of Financial Services (Formally the Insurance Department)
Paid claims CY	$ 29,395,009	From Section I, Col B, Line 4 below
Unpaid claims PY	$ 2,761,159	From Section I, Col C, Line 4 below. Includes expenses on claims reported and not yet paid, and expenses on claims incurred but not yet reported
Result	$ 3,631,889	
Total Claim Payable Per Actuary - Hospital and Medical Claims	$ 2,262,744	Includes expenses on claims reported and not yet paid, and expenses on claims incurred but not yet reported
Total Claims Payable Per Actuary - Drug Claims	7926	Includes expenses on claims reported and not yet paid, and expenses on claims incurred but not yet reported
Total Claims Payable Per Actuary - Other	0	Includes expenses on claims reported and not yet paid, and expenses on claims incurred but not yet reported
Total Claims Payable Per Actuary	$ 2,270,670	To be reported on page NY 3 Line 1.1
Total Additional Amount Requirered by Section 4706(a)(1)	$ 1,361,219	To be reported on Page NY 3 Line 1.2
Total Claims Payable	$ 3,631,889	To be reported on Page NY 3 line 1.3

SECTION I — CLAIMS INCURRED

A Description of Claims	B Paid During Year	C Unpaid Prior Year	D Unpaid Current Year	E Incurred This Year* (B - C + D)
1. Hospital & Medical Claims - Per Actuary	20,881,539	2,738,512	2,262,744	20,405,771
2. Drug Claims - Per Actuary	8,513,470	22,647	7,926	8,498,749
3. Other - Per Actuary	-	-	-	-
4. Total	29,395,009	2,761,159	2,270,670	28,904,520

*Must equal hospital and medical expenses accrued and unpaid which are reported on Report #2, page NY4, Line18.

SECTION II — ANALYSIS OF UNPAID CLAIMS — CURRENT FISCAL YEAR

A Description of Claims	B Reported Claims in Process of Adjustment	C Estimated Incurred but Unreported	D Total—Claims Payable* (Columns B + C)
1. Hospital & Medical Claims - Per Actuary	380,684	1,882,060	2,262,744
2. Drug Claims - Per Actuary	-	7,926	7,926
3. Other - Per Actuary	-	-	-
4. Total	380,684	1,889,986	2,270,670

* Must equal Section 1, Col. D.

SECTION III — ANALYSIS OF UNPAID CLAIMS — PREVIOUS FISCAL YEAR

A	Claims Paid During the Year*		Claims Unpaid at End of Current Year Viz: Estimated Liability at End of Current Year		F Total Claims Paid During the Year and Claims Unpaid at End of Current Year on Claims Incurred in Prior Years (B + D)	G** Estimated Liability of Unpaid Claims at End of Previous Year	H Amount Unpaid Claims is Over or (Under) Reserved
Description of Claims	B On Claims Incurred Prior to Current Year	C On Claims Incurred During the Year	D On Claims Unpaid at End of Previous Year	E On Claims Incurred During the Year			
1. Hospital & Medical Claims	1,606,753	19,274,786	21,755	2,240,989	1,628,508	2,738,512	1,110,004
2. Drug Claims	22,563	8,490,907	-	7,926	22,563	22,647	84
3. Other	-	-	-	-	-	-	-
4. TOTAL	1,629,316	27,765,693	21,755	2,248,915	1,651,071	2,761,159	1,110,088

* Must equal Section 1, Col. B.

** Must equal Section 1, Col. C.

NOTE: The sum of the amounts reported on Line 4, Column D+E must equal the amount reported on Schedule F, Section II, Line 4, Column D

NOTE: All three sections must be reported on a fiscal year basis.

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Attachment E

Statement of Actuarial Opinion
Greater Tompkins County Municipal Health Insurance Consortium
Annual Statement as of December 31, 2015

Table of Key Indicators

This Opinion is	☒ Unqualified	☐ Qualified	☐ Adverse	☐ Inconclusive
Identification Section	☒ Prescribed Wording Only	☐ Prescribed Wording with Additional Wording		☐ Revised Wording
Scope Section	☒ Prescribed Wording Only	☐ Prescribed Wording with Additional Wording		☐ Revised Wording
Reliance Section	☒ Prescribed Wording Only	☐ Prescribed Wording with Additional Wording		☐ Revised Wording
Opinion Section	☐ Prescribed Wording Only	☒ Prescribed Wording with Additional Wording		☐ Revised Wording
Relevant Comments				☒ Revised Wording
☐ The Actuarial Memorandum includes "Deviation from Standard" wording regarding conformity with an Actuarial Standard of Practice				

Identification

I, Damon R. Hacker, ASA, MAAA, Managing Partner and Actuary, am an employee of Armory Associates, LLC. I am a member of the American Academy of Actuaries and recognized as qualified to perform actuarial valuations for organizations of this kind and have been retained by the Greater Tompkins County Municipal Health Insurance Consortium with regard to loss reserves, actuarial liabilities and related items. I was appointed on February 16th, 2016 in accordance with the requirements of the annual statement instructions. I meet the Academy qualification standards for rendering the opinion.

Scope

I have examined the assumptions and methods used in determining loss reserves, actuarial liabilities and related items listed below, as shown in the financial statements of the Greater Tompkins County Municipal Health Insurance Consortium as of December 31, 2015:

A. Claims unpaid (Page 3, Line 1.1); **$2,270,670**

B. Additional amounts required by Section 4706(a)(1) (Page 3, Line 1.2); **$1,361,219**

C. Total Claims Payable (Page 3, Line 1.3); **$3,631,889**

D. Surplus per Section 4706(a)(5) (Page 3, 21); **$1,879,368**

E. Any other loss reserves, actuarial liabilities, or related items presented as liabilities in the annual statement; **NOT APPLICABLE**

F. Specified actuarial items presented as assets in the annual statement; **NOT APPLICABLE**

Reliance

My examination included such review of the actuarial assumptions and actuarial methods and of the underlying basic liability records as such tests of the actuarial calculations as I considered necessary. I also reconciled the underlying basic liability records to Schedule F, Section III.

Opinion

In my opinion, the amounts carried in the balance sheet on account of the items identified above:

A. Are in accordance with accepted actuarial standards consistently applied and are fairly stated in accordance with sound actuarial principals;

B. Are based on actuarial assumptions relevant to contract provisions and appropriate to the purpose for which the statement was prepared;

C. Meet the requirements of the Insurance Laws and regulations of the State of New York and are at least as great as the minimum aggregate amounts required by New York and are in compliance with the terms of the Consortium's Certificate of Authority as determined by the Superintendent of Financial Services (i.e., 12% of annual medical and pharmacy incurred claims);

D. Make a good and sufficient provision for all unpaid claims and other actuarial liabilities of the organization under the terms of its contracts and agreements;

E. Are computed on the basis of assumptions and methods consistent with those used in computing the corresponding items in the annual statement as of the preceding year-end; and

F. Include appropriate provision for all actuarial items which ought to be established.

Schedule F, Section III was reviewed for reasonableness and consistency with the applicable Actuarial Standards of Practice.

Actuarial methods, considerations, and analyses used in forming my opinion conform to the relevant Standards of Practice as promulgated from time to time by the Actuarial Standards Board, which standards form the basis of this statement of opinion.

RELEVANT COMMENTS

The amount carried on the balance sheet for contingency (termination) reserves (i.e., the surplus account, page NY3, line 21) was not calculated using actuarial methods. Instead, it was determined using the methodologies described in Article 47, Section 4706(a)(5) of 5% of annualized earned premium equivalents.

Please note that the prior actuarial review of the outstanding claim liabilities was completed by a different actuarial firm. Based on the information provided in the previous report, it is our opinion that there was not a material change in the actuarial methods and assumptions.

Damon R. Hacker, ASA, FCA, MAAA
Managing Partner and Actuary
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Syracuse, NY 13202
Tel: (315) 752-0060 x328
Date: March 15, 2015